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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,678	06/30/2000	Curtis A. Vock	005127.01044	1240
22908 7590 03/02/2009 BANNER & WITCOFF, LTD. TEN SOUTH WACKER DRIVE SUITE 3000 CHICAGO, IL 60606				
EXAMINER CHARIOUL, MOHAMED				
ART UNIT 2857		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

09/607,678

**Applicant(s)**

VOCK ET AL.

**Examiner**

MOHAMED CHARIOUI

**Art Unit**

2857

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21, 23 and 25-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21, 23 and 25-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-884)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### DETAILED ACTION

1. Applicant cancelled claims 1-20, 22 and 24.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 21, 27-31, 35, 37, 38-41 and 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli (U.S. Patent Number 6,148,271) in view of Heitzman et al. (U.S. Patent number 4,716,458) and Pejas et al. (U.S. Patent Number 5,696,481).

**As per claims 21 and 35**, Marinelli teaches a base station (i.e. monitor unit) for displaying at least one performance metric (see col. 2, lines 60-65); one or more mobile sensing units for attachment with mobile participants in a competitive event within a competitive event area and for transmitting wireless data representing at least one performance metric (see col. 2, lines 25-30; col. 4, lines 36-48; col. 5, lines 29-55; and Fig. 1); and at least one relay unit for placement proximate to the competitive event area, the at least one relay unit being remote from the mobile sensing units and the base station, for receiving the wireless data representing the at least one performance metric from the sensing units (see col. 2, lines 47-52 and col. 18, lines 35-49).

Marinelli does not teach at least one camera for capturing at least one image and transmitting data representing said at least one image to the base station to correlate with the wireless data representing at least one performance metric.

Heitzman et al. teach a camera, positioned in the vehicle, for capturing images of the driver and the position of the steering wheel as operated by the driver and provide a real-time correlation of the captured images and the recorded performance data (see Abstract; col. 1, lines 5-11; col. 2, line 65 through col. 3, line 5; col. 3, lines 40-64; and col. 4, lines 6-26). It would have been obvious to one having ordinary skill in the art at the invention was made to incorporate Heitzman et al. teaching into Marinelli's teaching because it would represent the vehicle's performance capability in real time superimposed upon the driver's view of the roadway ahead and the present steering wheel position. Therefore, the manner in which the driver utilizes the vehicle's capabilities in performing maneuver would be evaluated.

Marinelli does not teach that the at least one relay unit is stationary within the competitive event area and wirelessly transmits the received data to the base station.

Pejas et al. teach this feature (see col. 1, line 58 to col. 2, line 6). It would have been obvious to one having ordinary skill in the art at the invention was made to incorporate Pejas et al. teaching into Marinelli's teaching because it would transmit the data wirelessly to the base station. Therefore, the wiring costs and complications of the relay system would be obviated.

**As per claim 39**, Marinelli teaches detecting, by a mobile sensing unit engaged to a mobile object in an event area, at least one performance metric of the mobile object (see col. 2, lines 25-30); transmitting, by the mobile sensing unit, wireless data representing the performance metric (see col. 4, lines 36-48; col. 5, lines 29-55; and Fig. 1);

Marinelli teach a relay unit that transmits and receives data (see col. 2, lines 25-30 and col. 18, lines 45-48).

Marinelli does not teach that the relay unit is stationary within the event area and remotely from the mobile sensing units wirelessly transmits the received data representing the performance metric.

Pejas et al. teach this feature (see col. 1, line 58 to col. 2, line 6). It would have been obvious to one having ordinary skill in the art at the invention was made to incorporate Pejas et al. teaching into Marinelli's teaching because it would transmit the data wirelessly to the base station. Therefore, the wiring costs and complications of the relay system would be obviated.

Marinelli does not teach capturing, by a mobile camera coupled to the mobile object, an image and correlating the performance metric with the image.

Heitzman et al. teach a camera, positioned in the vehicle, for capturing images of the driver and the position of the steering wheel as operated by the driver and provide a real-time correlation of the captured images and the recorded performance data (see Abstract; col. 1, lines 5-11; col. 2, line 65 through col. 3, line 5; col. 3, lines 40-64; and col. 4, lines 6-26). It would have been obvious to one having ordinary skill in the art at the invention was made to incorporate Heitzman et al. teaching into Marinelli's teaching because it would represent the vehicle's performance capability in real time superimposed upon the driver's view of the roadway ahead and the present steering wheel position. Therefore, the manner in which the driver utilizes the vehicle's capabilities in performing maneuver would be evaluated.

**As per claim 40**, Marinelli teaches receiving by the base station, the wireless data representing the performance metric (see col. 2, lines 47-52 and col. 18, lines 35-49).

**As per claims 27, 37 and 41**, Marinelli further teaches a display device electronically coupled to the base station, and wherein the base station displays the at least one performance metric on the display device (see col. 2, lines 53-65).

**As per claims 28, 38 and 43**, Marinelli further teaches that the performance metric is at least one selected from the group of rotation, spin, tilt, leaning, acceleration, speed, edge time, distance, drop distance, airtime and g-force (see col. 6, lines 21-34 and col. 3, lines 17-30).

**As per claim 29**, Marinelli further teaches that the performance metric includes a rotation rate or total rotation (see col. 10, lines 34-60).

**As per claim 30**, Marinelli further teaches that the performance metric includes a rotation component (see col. 4, lines 36-48).

**As per claim 31**, Marinelli further teaches that the sensing unit includes an accelerometer (see 2, lines 40-43).

3. **Claims 36 and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Heitzman et al. and Pejas et al. and further in view of Jones (U.S. Patent Number 6,292,213).

Marinelli in view of Heitzman et al. and Pejas et al. teach the system as stated above except that the system comprises at least one camera detachably engaged to the mobile object to capture at least one image and transmit data representing the image.

Jones teaches this feature (see col. 8, line 44 to col. 9, line 15; col. 6, lines 46-67; and Fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Jones's teaching into Marinelli in view of Heitzman et al. and Pejas et al.'s teaching because images would be captured and sent to the base station to be displayed; therefore, viewers would be able to visually monitor the participant's movements and judge his/her performance.

4. **Claim 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Pejas et al. and Boyd et al. (U.S. Patent Number 5,023,727).

Marinelli in view of Heitzman et al. and Pejas et al. teach the system as stated above except that the at least one relay unit includes at least two relay units.

Boyd et al. teach this feature (see col. 8, lines 41-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Boyd et al.'s teaching into Marinelli in view of Heitzman et al. and Pejas et al.'s teaching because it would provide two relays for transmitting different types of data representing the participant performance to the base station; therefore, the viewer could monitor the participant activities and make better judgment about the participant performance.

5. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Heitzman et al. and Pejas et al. and Boyd et al. and further in view of Eden et al. (U.S. Patent Number 5,993,335).

Marinelli in view of Heitzman et al. and Pejas et al. and Boyd et al. teach the system as stated above except that the event area is a half pipe event area.

Eden et al. teach this feature (see col. 1, line 55 to col. 2, line 7). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Eden et al. teaching into Marinelli in view of Heitzman et al. and Pejas et al. and Boyd et al. teaching because the sport's arena would be a half pipe area. Therefore, participants would be able to use the ramps of the half pipe to gain speed and perform better rotations to earn better scores.

6. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view Heitzman et al. and Pejas et al. and Shea (U.S. Patent Number 6,430,453).

Marinelli in view of Heitzman et al. and Pejas et al. teach the system as stated above except for a scoreboard and that the base station displays at least one performance metric on the scoreboard.

Shea teach this feature (see col. 1, line 55 to col. 2, line 9 and col. 3, lines 30-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Shea's teaching into Marinelli in view of Heitzman et al. and Pejas et al.'s teaching because the performance scores of the participants would be displayed on a scoreboard. Therefore, viewers would be able to compare scores to determine the one among the participants who performed the best.

7. **Claims 32-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Heitzman et al. and Pejas et al. and Mickelson (U.S. Patent Number 6,163,021).

Marinelli in view of Heitzman et al. and Pejas et al. teach the system as stated above except that the sensing unit includes one or more magnetic field sensing device.



Mickelson teaches a magnetic field sensing device (see col. 2, line 36 to col. 3, line 20 and col. 3, line 58 to col. 4, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Mickelson's into Marinelli in view of Heitzman et al. and Pejas et al.'s teaching, because the magnetic field sensor would provide an electrical signal that represents the angular orientation of the participant relative to the reference axis, therefore the pitch and the roll angles would be determined in addition to the performance metric parameters of interest to better analyze the participant's performance.

#### ***Response to Arguments***

8. Applicant's arguments with respect to claims 21, 23 and 25-43 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

2/19/09

/Edward Raymond/

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Primary Examiner, Art Unit 2857